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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/803,051 | 03/18/2004 | Ronald S. Plantan | 011351.52877US | 4611 |

23911 7590 06/05/2007
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| EXAMINER |
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BURCH, MELODY M

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| ART UNIT | PAPER NUMBER |
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3683

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| MAIL DATE | DELIVERY MODE |
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06/05/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/803,051 | Applicant(s) PLANTAN, RONALD S. | |
| | Examiner Melody M. Burch | Art Unit 3683 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-9 and 16-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 3384203 to Walther et al. in view of US Patent 1737332 to Pugh et al.

Re: claims 1-3 and 16. Walther et al. show in figure 1 a brake disc comprising a hub portion 20, a friction portion 28, the friction portion formed as a generally planar ring as shown in figure 1 and a connecting flange portion shown above element number 24, wherein the connecting flange portion connects a radially outer region of the hub portion to a radially inner region of the friction portion radially inward from a radially innermost friction surface of the friction portion as shown, the connecting flange portion has a length such that when the hub portion and a wheel rim 22 adapted to be mounted on a hub end of a vehicle axle 15 are located at the hub end of the axle, the friction portion is positioned with respect to the wheel rim, and the friction portion has an outer radius positioned with respect to the greatest inner radius of the wheel rim.

Walther et al. fail to show or suggest the limitation of the friction portion being arranged with respect to the wheel rim such that it is positioned outboard of the wheel

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rim or such that it has an outer radius greater than a greatest inner radius of the wheel rim.

Pugh et al. teach in figure 3 the use of a brake device having a connecting flange portion (e) arranged such that a friction portion (h) is outboard of the wheel rim (c) and the friction portion has an outer radius greater than a greatest inner radius of the wheel rim.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the arrangement of the friction portion with respect to the wheel rim to have included the friction portion being outboard of the wheel rim and the friction portion having an outer radius greater than a greatest inner radius of the wheel rim, as taught by Pugh et al., in order to provide a means of permitting air to access the friction portion to improve brake cooling and to provide less obstructive access to the friction portion for repair purposes.

Re: claims 4-6 and 17-19. Examiner notes that the heat conduction limiting section of Walther et al., as modified, includes a section shown above element number 24 in figure 1 of Walther et al. having a reduced diameter compared to the larger diameter shown immediately below the bottom of friction portion 28.

Re: claims 7-9 and 20-22. Walther et al., as modified, teach in figure 1 of Walther et al. the limitation wherein at least one ventilation aperture shown surrounding element 25 is provided in the connecting flange portion.

3. Claims 10-15 and 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 3384203 to Walther et al. in view of US Patent 1737332 to

Pugh et al. as applied to the appropriate claims above, and further in view of US Patent 2655237 to Benson.

Walther et al., as modified, describe the invention substantially as set forth above, but are silent with respect to the inner radius of the friction portion including a plurality of cooling fins.

Benson teaches in figure 1 the limitation of wherein a plurality of cooling fins 35 are disposed about (to the right of) an inner radius of the friction portion 19.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the area about the inner radius of the friction portion to have been marked by a plurality of cooling fins, as taught by Benson, in order to provide a means of improving heat dissipation within the brake device.

Response to Arguments

4. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melody M. Burch whose telephone number is 571-272-7114. The examiner can normally be reached on Monday-Friday (6:30 AM-3:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on 571-272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

mmb
May 22, 2007

Melody M. Burch
Melody M. Burch
Primary Examiner
Art Unit 3683
5/22/07